

AMENDMENTS TO THE CLAIMS

1-12. (Canceled).

13. (Currently Amended) A portable electronic apparatus comprising a semiconductor memory device comprising:

a nonvolatile memory section; and

a volatile memory section, wherein

the nonvolatile memory section includes a nonvolatile memory cell having a single gate electrode formed on a semiconductor layer via a gate insulating film, a channel region disposed under the gate electrode, diffusion regions disposed on both sides of the channel region and having a conductive type opposite to that of the channel region, and memory functional units formed on both sides of the gate electrode and having a function for retaining charges, wherein each of said memory functional units are an insulator film, wherein

the nonvolatile memory cell and the volatile memory cell are formed on a single chip having a common semiconductor substrate.

14. (Currently Amended) A portable electronic apparatus comprising a semiconductor memory device comprising:

a nonvolatile memory section;

a volatile memory section, wherein

the nonvolatile memory section includes a nonvolatile memory cell having a single gate electrode formed on a semiconductor layer via a gate insulating film, a channel region disposed

under the gate electrode, diffusion regions disposed on both sides of the channel region and having a conductive type opposite to that of the channel region, and memory functional units formed on both sides of the gate electrode and having a function for retaining charges, wherein each of said memory functional units are an insulator; and

a logical operation section for performing operation processing on the basis of information stored in the semiconductor memory device, wherein

the nonvolatile memory cell and the volatile memory cell are formed on a single chip having a common semiconductor substrate.

15. (Previously Presented) The portable electronic apparatus according to claim 13, wherein

the volatile memory section includes an SRAM.

16. (Canceled).

17. (Previously Presented) The portable electronic apparatus according to claim 13, wherein

the volatile memory section includes a DRAM.

18. (Previously Presented) The portable electronic apparatus according to claim 17, wherein

the volatile memory section includes refreshing operation means for refreshing the DRAM.

19. (Previously Presented) The portable electronic apparatus according to claim 13, further comprising:

- a first chip forming the nonvolatile memory section;
- a second chip forming the volatile memory section; and
- a single package containing therein the first chip and the second chip.

20. (Previously Presented) The portable electronic apparatus according to claim 13, wherein

at least a part of the memory functional units overlaps with a part of the diffusion region.

21-25. (Canceled).

26. (Currently Amended) The portable electronic apparatus according to claim ~~16~~ 13, wherein said volatile memory section has substantially the same structure as the nonvolatile memory section, except that said volatile memory section has additional extension regions adjacent to the diffusion regions on both sides of the channel region.

27. (Canceled).

28. (Previously Presented) The semiconductor memory device according to claim 26, wherein said extension regions of said volatile memory section are lightly doped drain regions.

29. (Canceled).

30. (Previously Presented) The portable electronic apparatus according to claim 13, wherein said insulator film as each memory functional unit is a film having a function of accumulating or trapping charges or a function of holding a charge polarized state, in which said insulator film includes a silicon nitride film;
said insulator film has therein a conductor film or a semiconductor layer;
said insulator film has therein one or more dots made of a conductor or a semiconductor;
or

said insulator film is a single layer or a lamination layer that includes a ferroelectric film in which internal charges are polarized by an electric field and its state is held.